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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
08/957,187	10/24/1997	EKKEHARD BEER	514425-3566	9736

20999 7590 07/26/2005
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NEW YORK, NY 10151

EXAMINER

KRUER, KEVIN R

ART UNIT PAPER NUMBER

1773

DATE MAILED: 07/26/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

08/957,187

Applicant(s)

BEER ET AL.

Examiner

Kevin R. Kruer

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 February 2004.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 10-14 and 16-23 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☐ Claim(s) 10-14 and 16-23 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

This action is in response to the Petition decision mailed April 21, 2005.

Claim Objections

1. The following claims are objected to because of informalities: Claim 11 contains an improper Markush group. The newly added word "and" should appear between the penultimate member and the last member of the Markush group.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 10-14, and 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincok (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657) for reasons of record.

Hirose discloses a multi-layer laminate in which the sheets or film based on polyolefins are laminated to form a material for packaging. The multi-layer laminate comprises a layer made from at least one cycloolefin-based resin selected from the group consisting of (a1) an ethylene/cycloolefin random copolymer obtained by polymerizing a cycloolefin (represented by 1 or 2) with ethylene, (a2) a ring opening polymer of the cycloolefins or its hydrogenation product and (a3) a graft-modification

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product of (a1) or (a2) (column 1, lines 13-16, 54-64 and column 2, lines 1-5). The structure of the cycloolefin component is given in column 2 wherein n may be zero or 1, m may be zero or any positive integer, q may be zero or 1 and substituents R_1 - R_{18} may be a radical selected from the group consisting of hydrogen atom, halogen atom, halogen atom and hydrocarbon groups and wherein the R groups may form a monocyclic or polycyclic ring by combining with each other. The halogen atoms may be fluorine, chlorine, bromine or iodine and the hydrocarbon groups may be C_1 - C_{20} alkyl groups, C_1 - C_{20} halogenated alkyl groups, C_3 - C_{15} cycloalkyl groups and C_6 - C_{20} aromatic hydrocarbons (col 4, lines 8-25). The ethylene/cycloolefin random copolymer usually contains the constituent unit derived from ethylene in an amount of 52-90mol% and the constituent unit derived from a cycloolefin in an amount of 10-48mole%. The ethylene/cycloolefin copolymer may contain constituent units derived from other copolymerizable monomers such as monocyclic olefins in an amount of 20mole% or less (column 21, lines 64-67; column 22, lines 1-4, 66-67; column 23, lines 31 through column 24, lines 1-2). The cycloolefin-based resin may be blended with other resin and various additives (column 29, lines 56-67). The multi-layer laminate may be subjected to monoaxial or biaxial stretching to produce sheet or film material suitable for packaging drugs, foods, and cigarettes. Such a material is superior in moisture-proof properties and therefore may be used as a blister pack, bottle or other type of container (column 34, lines 33-67 and column 35, lines 1-19). The thickness of the laminate is 100um as indicated in Table 1 in columns 35 and 36.

Hirose does not teach the claimed puncture resistance or the claimed moisture impermeability. However, Silverman teaches that molecular orientation improves thermoplastics' impact resistance (col 1, lines 11+). (NOTE: the test method by which applicant measures puncture resistance is the same test method utilized in the art to measure impact resistance. Therefore, the examiner will utilize "puncture resistance" and "impact resistance" as synonyms in this application). Sincock similarly teaches that molecular orientation of thermoplastic materials is known in the art to improve the material's impact resistance. Furthermore, it is known in the art that molecular orientation of thermoplastic materials improve the material's gas impermeability (see '657, col 1, lines 10-15; '797, col 6, lines 23+); and '665, col 1, lines 10+). Therefore, the examiner takes the position that it would have been obvious to one of ordinary skill in the art to vary the molecular orientation of the film taught by Hirose in order to optimize the film's water vapor permeability and impact resistance. The examiner notes that moistureproofness and mechanical strength are desired by Hirose (see col 34, lines 60+).

4. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincock (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657), as applied to claims 1-14 and 17-20, above, and further in view of Tanaka et al. (US 5,556,920) for reasons of record.

Hirose is relied upon as above, but does not specifically state that the multilayer film may contain inorganic filler. However, Tanaka discloses a monoaxially stretched

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polypropylene film composition comprising a crystalline polypropylene and a monocyclic olefin polymer (refer to abstract). Anti-blocking agents that may be used include silica, alumina, and calcium carbonate (col 6, lines 66-67). Accordingly, it would have been obvious to one of ordinary skill in the art to fabricate polymeric films that contain fillers particularly since Tanaka suggest the addition of anti-blocking agents leads to films of improved transparency, image clarity, and formability (col 8, lines 40-43 and 51-56).

5. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincock (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657), as applied to claims 10-14 and 17-20 above, and further in view of Schirmer (US 4,442,147) and US2002/0037393A1 (Strobel et al) for reasons of record.

Hirose in view of (a) Silverman or Sincock and (b) Valyi, Hale, or Ryder is relied upon as above. None of the references teach the claimed film elongation at break or film tear strength in the machine direction. However, the film taught by Hirose desirably possesses high mechanical strength and easy hand cutting (col 35, lines 12+). With respect to mechanical strength, Strobel teaches orientation of thermoplastic films typically produce films with a decreased elongation at break (paragraph 21). Furthermore, Schirmer teaches that film orientation will affect a film's tear strength in the machine direction (col 2, lines 45+). Thus, it would have been obvious to one of ordinary skill in the art to control the degree and direction of orientation in order to control the film's elongation at break and the tear strength in the machine direction.

6. Claim 23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hirose et al. (US 5,532,030) in view of (a) Silverman (US 3,786,221) or Sincok (US 3,900,120) and (b) Valyi (US 5,702,665), Hale et al. (US 4,325,797), or Ryder (US 4,285,657) for reasons of record.

Hirose discloses a film or sheet made from at least one cycloolefin-based resin selected from the group consisting of (1) an ethylene/cycloolefin random copolymer obtained by polymerizing a cycloolefin (represented by formula I) with ethylene, (2) a cycloolefin homopolymer, or (3) hydrogenated product thereof (abstract). The structure of the cycloolefin component is given in the abstract wherein n may be zero or positive integer, and substituents R_1 - R_{12} may be a radical selected from the group consisting of hydrogen atom, halogen atom, and hydrocarbon groups (abstract). See pages 9+ for specific examples of cycloolefins that are defined by formula I. The multi-layer laminate may be subjected to monoaxial or biaxial stretching and has a thickness of 0.5-5mm (page 28, lines 2+).

Hirose does not teach the claimed puncture resistance or the claimed moisture impermeability. However, Silverman teaches that molecular orientation improves thermoplastics' impact resistance (col 1, lines 11+). (NOTE: the test method by which applicant measures puncture resistance is the same test method utilized in the art to measure impact resistance. Therefore, the examiner will utilize "puncture resistance" and "impact resistance" as synonyms in this application). Sincok similarly teaches that molecular orientation of thermoplastic materials is known in the art to improve the material's impact resistance. Furthermore, it is known in the art that molecular

orientation of thermoplastic materials improve the material's gas impermeability (see '657, col 1, lines 10-15; '797, col 6, lines 23+); and '665, col 1, lines 10+). Therefore, the examiner takes the position that it would have been obvious to one of ordinary skill in the art to vary the molecular orientation of the film taught by Hirose in order to optimize the film's water vapor permeability and impact resistance. The examiner notes moisture-proofness and mechanical strength are desired by Hirose (see abstract).

Response to Arguments

Applicant's arguments with respect to the pending claims have been fully considered but are not persuasive.

Applicant argues the rejection is based on the combination of 9 US patents. The examiner respectfully disagrees. The rejection currently relies upon 3 references to render the claimed invention obvious. Silverman and Sincock are equivalently utilized to teach molecular orientation improves a thermoplastic's impact resistance. Similarly, Valyi, Hale, and Ryder each individually is relied upon to teach molecular orientation improves a material's gas impermeability.

Applicant argues that none of the patents teach or suggest the claimed puncture resistance of less than 300N/mm. The examiner concedes none of the references explicitly teach said limitation, but the prior art does teach puncture resistance is a result effective variable. Therefore, the examiner maintains the position that it would have been obvious to optimize the film's puncture resistance.

Applicant further argues one of ordinary skill in the art would disagree with the Examiner's allegation that puncture resistance and impact resistance are synonymous.

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However, applicant fails to provide support for said argument. The examiner reminds applicant that counsel's argument cannot take the place of evidence. Therefore, the examiner maintains the position for the reasons noted in the rejection.

Applicant further argues the object of the invention is not to improve the mechanical strength of the film, but rather to adjust the puncture resistance and tenacity in a defined range. The examiner notes the rejection never took the position that it would have been obvious to "improve" or increase the mechanical strength of the film. Rather, the examiner took the position that puncture resistance is a result effective variable and that it would have been obvious to optimize the film's puncture resistance.

Conclusion

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. EP0384694 teaches orientation of films comprising cycloolefin copolymers.

8. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of

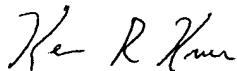
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the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kevin R. Kruer whose telephone number is 571-272-1510. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carol Chaney can be reached on 571-272-1284. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Kevin R. Kruer
Patent Examiner-Art Unit 1773